cdfa CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE

FERTILIZER RESEARCH AND EDUCATION PROGRAM FREP

California Department of Food and Agriculture

FERTILIZER RESEARCH AND EDUCATION PROGRAM

2009 REQUEST FOR PROJECT SUGGESTIONS

The California Department of Food and Agriculture (CDFA) Fertilizer Research and Education Program (FREP) is accepting project suggestions to help provide growers and industry with cost-effective practices to improve the efficient use of fertilizer and minimize environmental impacts. Suggestions may focus on research and/or education projects (per key research area goals listed below) that benefit the public body of knowledge. FREP does not generally support proprietary product development projects. A grant funding limit of $50,000 per year for up to three years is typical for projects, but larger projects will be considered. Multiple project suggestions will be accepted. All projects must be relevant to California conditions.

WHO MAY APPLY

Any individual or group may submit a project suggestion.

SELECTION AND NOTIFICATION PROCESS

Applicants first submit a two-page project suggestion to FREP. The FREP Technical Advisory Subcommittee, which consists of growers, representatives of institutions of higher education, the fertilizer industry, CDFA, U.S. Department of Agriculture and other governmental agencies, will review the suggestions to determine whether they are aligned with the program's key research area goals. The committee will select project suggestions to include in the full Request for Proposals (RFP) based on project concept, impact, methodology, and feasibility. Then, the full RFP and submission guidelines will be released online in the California State Contracts Register, http://www.cscr.dgs.ca.gov/cscr/, and the FREP website, http://www.cdfa.ca.gov/is/ffldrs/frep.html .

TIMELINE

Project suggestions due	March 2, 2009
Request for Proposals released	April 6, 2009
Proposals due	June 1, 2009
Award notification	October 2009
Project start date	January 2010 or later

KEY RESEARCH AREA GOALS

FREP has identified research areas for special emphasis in 2009, which center on themes of environmental quality through fertilizer efficiency and effectiveness:

- Updating nutrient requirements
- Improving fertilizer efficiency in drip irrigated micro-irrigation systems
- Increasing fertilizer efficiency through cost-benefit analysis
- Devising innovative techniques to improve fertilizer use efficiency

Additionally, FREP welcomes project suggestions for consideration in the following key research areas:

1 **Crop nutrient requirements —** determining or updating nutrient requirements to improve crop yield or quality in an environmentally sound manner.

Projects may include: research on crop nutrient uptake; the amounts, timing, and partitioning of nutrients removed from the soil; effects of soil chemistry on nutrient uptake; establishment or update of soil or tissue nutrient level thresholds used to determine fertilizer application timing and/or amounts; and the role of balanced nutrition in improving crop yield/quality.

2 **Fertilization practices —** developing fertilization practices to improve crop production, fertilizer use efficiency or environmental impacts.

Projects may include: research on slow-release fertilizers; foliar nutrient management; timing and effectiveness of fertilizer applications; new fertilizer technologies; and nutrient movement in differing soil types, cropping systems, and application methodologies.

3 **Fertilizer and water interactions —** developing and extending information on fertigation methodologies leading to maximum distribution uniformity and minimizing fertilizer losses.

Other approaches that will reduce ground and surface water contamination or improve the efficiency of fertilizing materials with respect to water management will also be considered.

4 **Site-specific fertilizer technologies —** demonstrating and quantifying applications for site-specific crop management technologies and best management practices related to precision agriculture.

Projects may include: development of fertilizer yield response and utilization models based on spatial and temporal variability; and identification and quantification of interactions such as soil quality issues, soil type characteristics, soil fertility or irrigation variability, and economic relationships.

5 **Diagnostic tools for improved fertility fertilizer recommendations —** developing field and laboratory tests for predicting crop nutrient response that can aid in making fertilizer recommendations.

New techniques and diagnostic tools for monitoring soil and plant nutrient status are also encouraged. Field correlation studies may also be appropriate.

6 **Nutrient/pest interactions and nutrient/growth regulator interactions —** demonstrating or providing practical information to growers and production consultants on nutrient/pest interactions.

Pests may include insects, weeds or diseases.

7. **Education and public information —** creating and implementing educational activities that result in adoption of fertilizer management, practices and technologies that result in change.

Types of activities include:

- Programs that demonstrate to growers improved profitability, reduced risk or increased ease of management.
- On-farm demonstrations, education and/or training of proven practices and technologies within FREP goals to encourage their adoption in California with priority areas given to impaired water bodies.
- Programs to educate growers, fertilizer dealers, students, teachers, and the general public about the relationships between fertilizers, food, nutrition, and the environment.

Preparation of publications, slide sets, videotapes, conferences, field days, and other outreach activities.

8. **Additional areas —** supporting FREP's mission, such as water quality, air quality, tillage, crop rotation, economics of fertilizer use and cropping systems.

HOW TO APPLY

Project suggestions may not exceed two pages. Please include the following information:

- Project title, project location, project duration, and project leader(s) information (name, title, affiliation, mailing address, telephone number, and e-mail address, if applicable).
- A simple and concise summary of the problem to be addressed.
- Description of the target audience.
- Objectives of the proposed project, and a description of the general approach to be used.

(Note: Budget specifics are not required for project suggestions.)

Project suggestions are due by 4:00 p.m., March 2, 2009.

Incomplete, late, or project suggestions exceeding two pages will be returned and eliminated from consideration. While e-mailed project suggestions are preferred, mailed and faxed copies are acceptable. CDFA/FREP is not responsible for incomplete fax or e-mail transmissions.

SEND PROJECT SUGGESTIONS TO:

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Information about current FREP-sponsored projects is available by contacting FREP staff to request proceedings from the 2008 CDFA/FREP conference. Past FREP conference proceedings are also available.

This solicitation and other information about FREP are available on the FREP website at http://www.cdfa.ca.gov/is/ffldrs/frep.html .